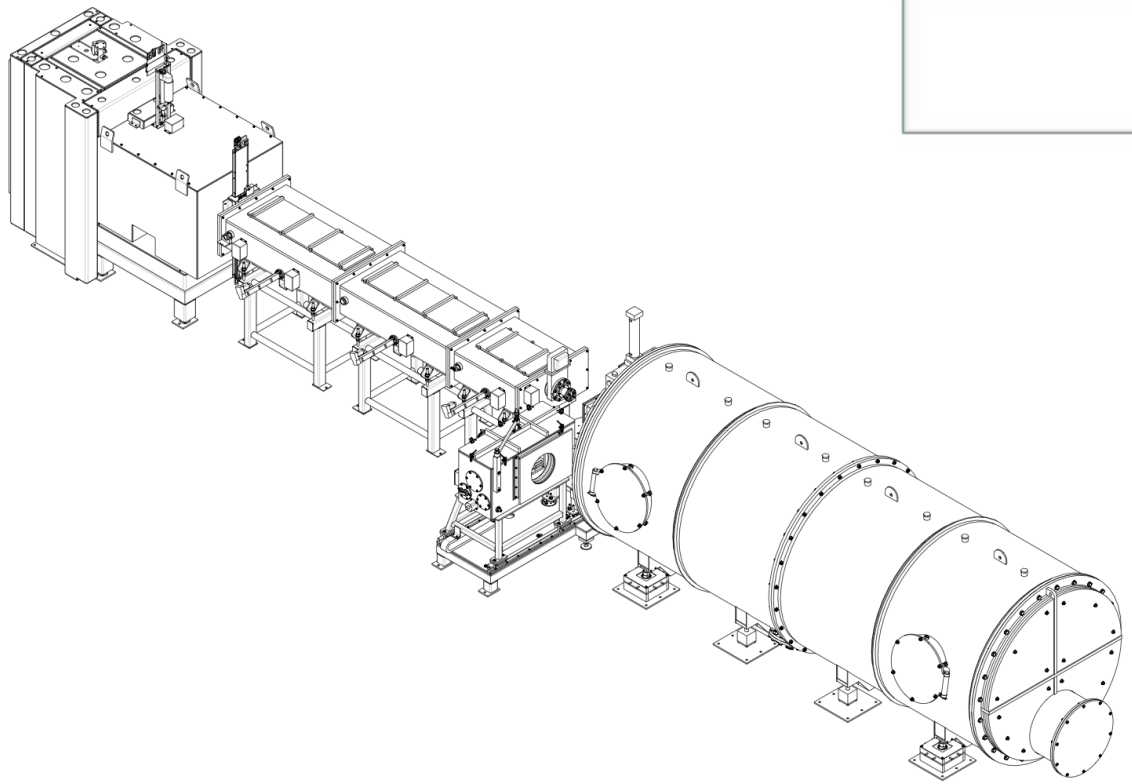
10 m SANS Instrument Installation Update



June, 4th, 2012

John Barker
NIST Center for Neutron Research

NIST Center for Neutron Research

10 m SANS Installation

- *Outline*
  - *Instrument Layout*
  - *Schedule*
  - *Status Update of Current Work*

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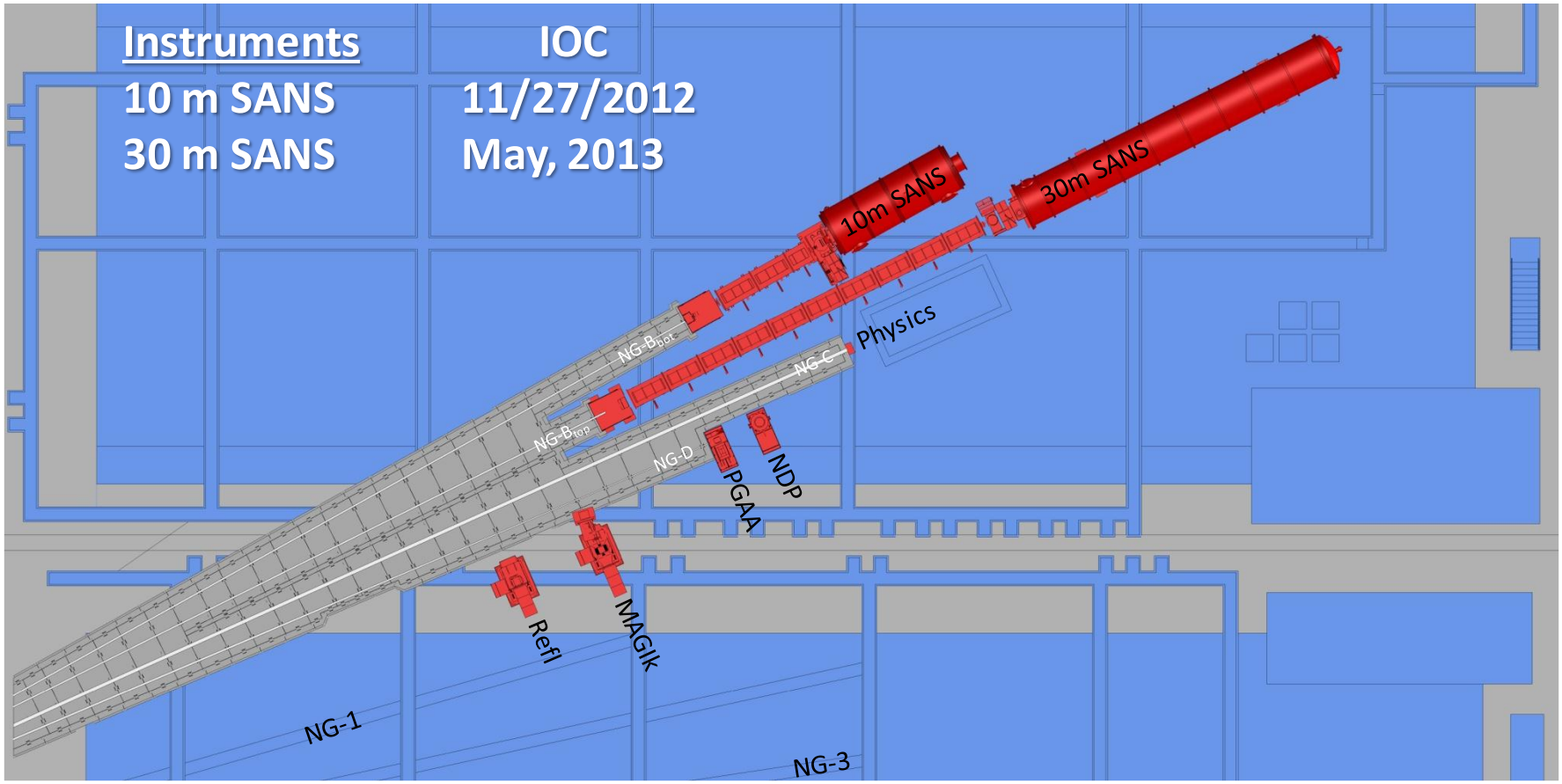

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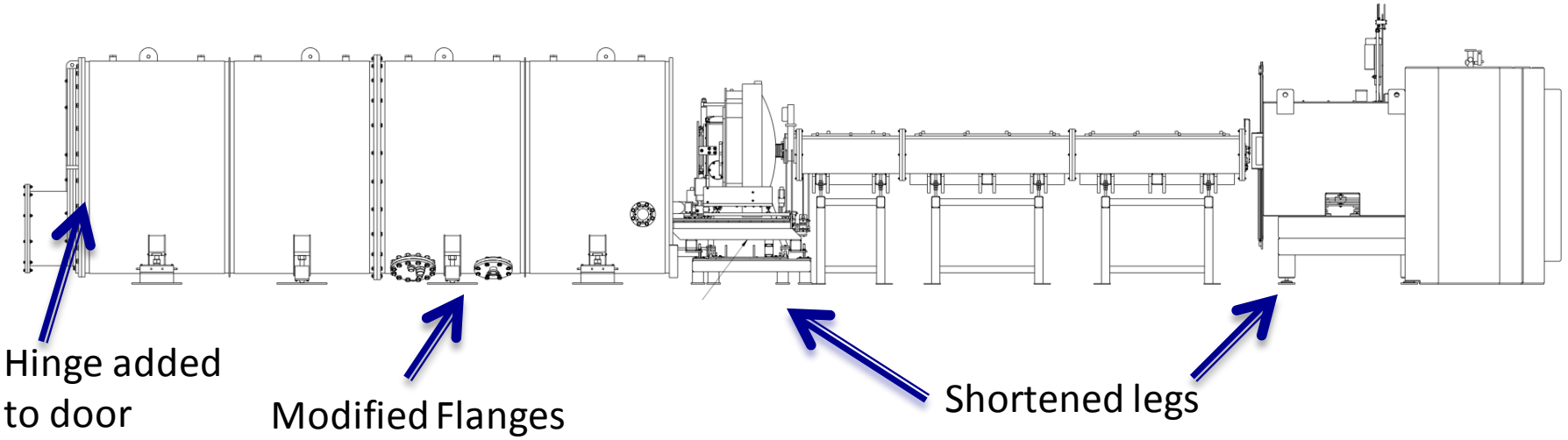
Finished Preassembly Tasks:

1) Lower instrument by 35 mm to accommodate lower beam height. **(done)**



2) Add hinge to rear door for quick access-**(done)**
3) Cabling of motors and testing **(done)**
4) Electronic System hardware (Viper, ICE, computers) + testing **(done)**

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Future Milestones

• Vacuum Test vSANS Detector Panels	July, 2012 (20 days)
• Testing of NICE Data Acquisition Software	Jun-Dec 2012 (120 days)
• Install Guides B_B, B_T , C and D in G100	April-Oct, 2012
• Install and align velocity selector, guides, vessels	Oct 26 (10 days)
• Final install Electrical (Plant)	Nov 9, (10 days)
• Final install Chilled water + compressed Air	Nov 9, (3 days)
• Reconnection and Testing of Elec. Cabling	Nov 9, (10 days)
• Final Instrument testing → **IOC**	**Nov 27, 2013 (10 days)**

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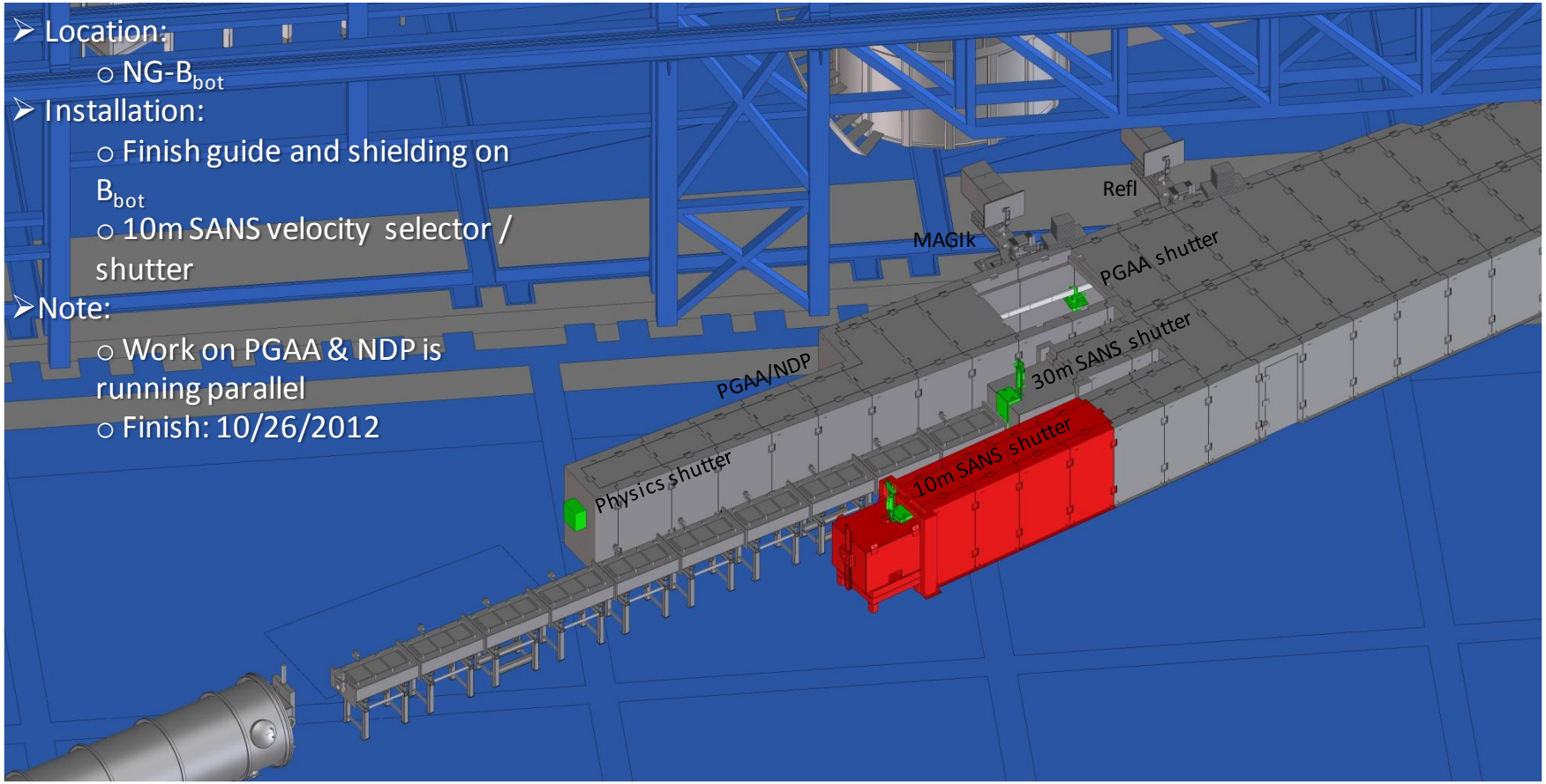
Status: 10/26/2012

Note: 30 m SANS not yet installed as shown on guide B_{top}



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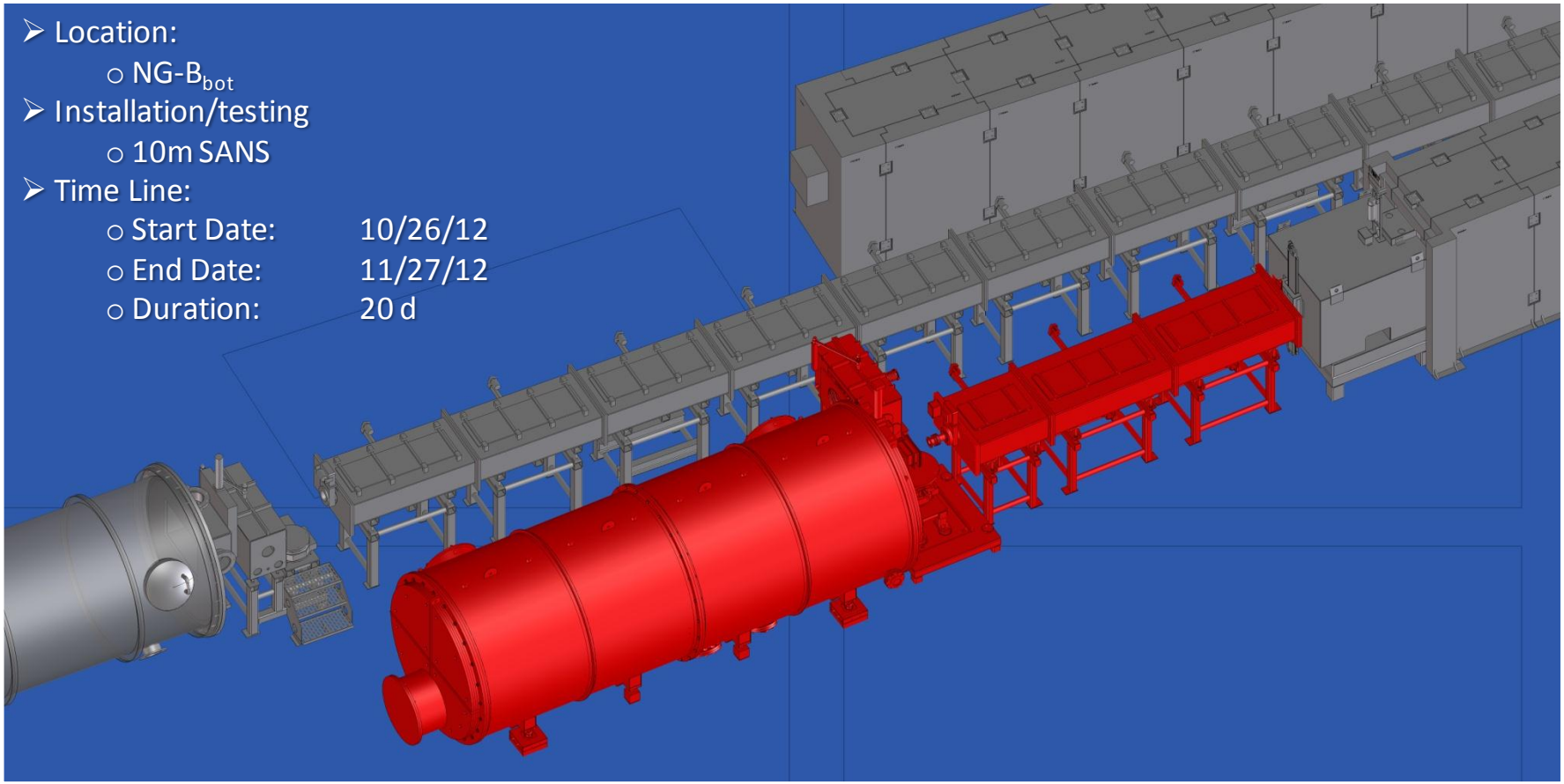
Initial Operating Condition (IOC): 11/27/2012

Note: 30 m SANS not yet installed as shown on guide B_{top}

- Location:
  - NG-B_{bot}
- Installation/testing
  - 10m SANS
- Time Line:
  - Start Date: 10/26/12
  - End Date: 11/27/12
  - Duration: 20 d



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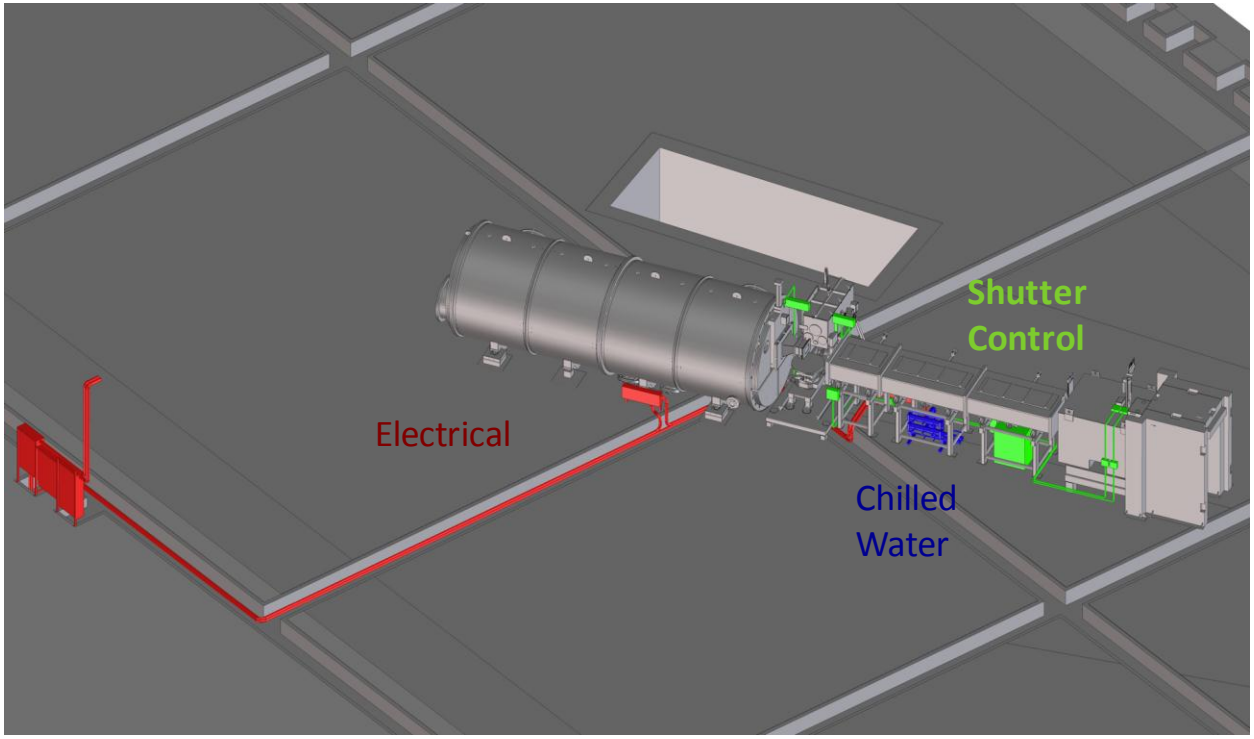
Electrical Installation: west view (Oct, 2012)



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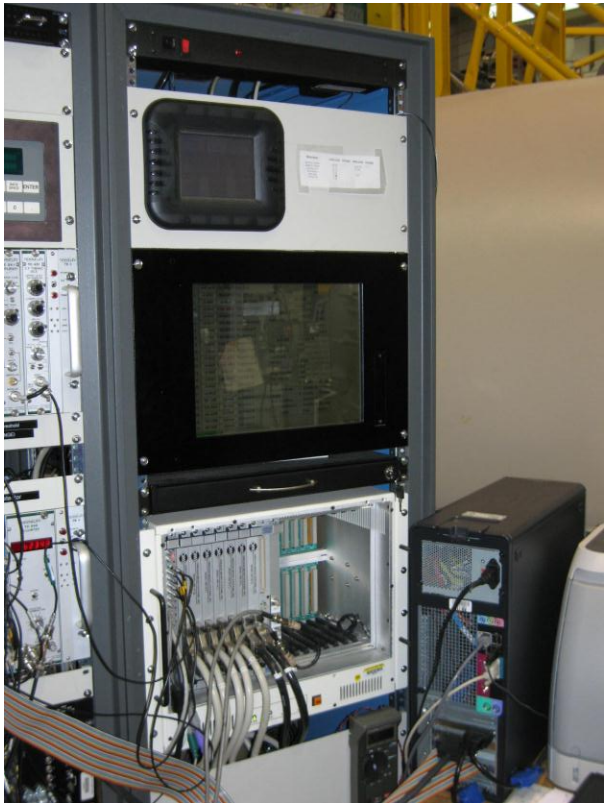
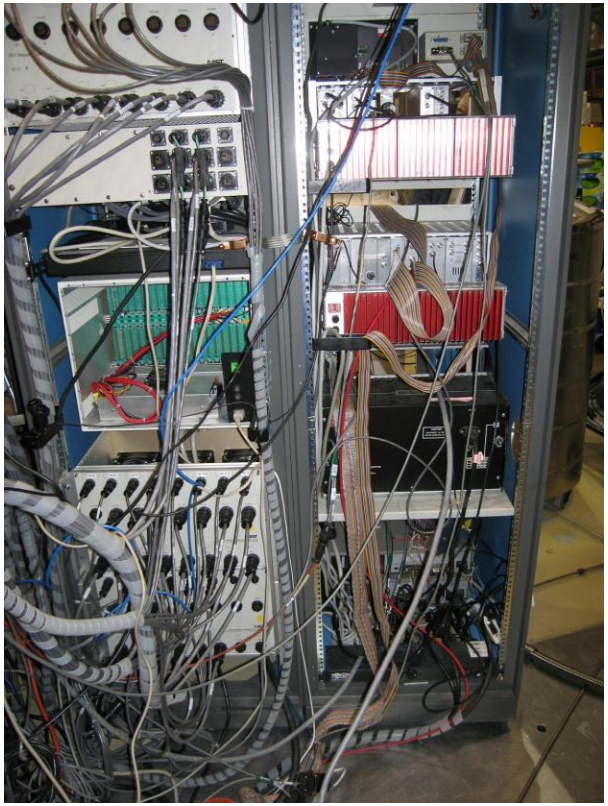
Most electronics from 30 m SANS simply replicated on 10 m SANS

Viper + VME crate (done)



All new cables (done)



Velocity Selector control upgrade **(in process)**

Outstanding Issues / Risks:

- **Coordinating Work within RFO + Plant // Finishing of Guide B_L**

  Risk mitigation:

  RFO holding biweekly 10-m SANS commissioning meetings

- **Repairing bearings/housing to velocity selector (#3):**

Ongoing work with Mech. Engineer + Mech. Technician

- **Testing of new Selector Controller:**

Ongoing work with Elec. Engineer

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